Poe Creek State Forest & Piedmont Forestry Center

Forest Certification Management Plan

South Carolina Forestry Commission

Working Document

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Scope

This SFI Manual was developed for the improved long-term management of Poe Creek State Forest and the Piedmont Forestry Center (hereafter referred to jointly as Poe Creek State Forest). The two properties comprise a total of 2508 acres across Pickens and Oconee Counties, in the far northwest corner of the state.

Poe Creek itself is 1806 acres, and was purchased from Crescent Resources, Inc. on April 6, 1999. Of the total acreage, there are approximately 800 acres under forest management. 610 acres are in planted pine type and 190 acres have been silvicultural clearcut and allowed to regenerate naturally to native hardwood species. The remaining1006 acres are in natural upland hardwood type and a mixture of white pine and hardwood. This area has steep terrain and is limited in what forest management can occur, or needs to occur.

The Piedmont Forestry Center is approximately 702 acres, and has a long history of service to the Agency, serving in the past as a regional nursery. The property consists several facilities, several large field openings managed for wildlife and recreation, and approximately 500 acres that are available for forest management. These stands consist of 208 acres in Loblolly Pine, 27 acres in upland Virginia Pine, 70 acres in upland hardwoods, 32 acres in hardwood pine mix, and the remaining 150 acres in pine hardwood. Due to recreational use, steep topography, and other restrictions, there is little opportunity for intense forest management on the property.

As feasible additional data will be collected to refine stand conditions and management recommendations.

Company Description

Poe Creek State Forest is managed as two discontinuous blocks and within these blocks, stands are delineated at an appropriate scale for management (Figures 1 & 2). Data for these stands is maintained in a GIS, which contains all relevant stand level data. As a State Forest, we are committed to long-term sustainable management of the resource for multiple use purposes. However, unique to our Agency, our State Forests are mandated to be self-supporting, with the majority of our income coming from timber harvest operations. Therefore, within the scope of our management approach, and our attempt to provide the people of South Carolina with greatest and best use of the Forest, we do so with the over-arching requirement that significant timber harvesting will be required.

Figure 1. Piedmont Forestry Center and stand delineations.

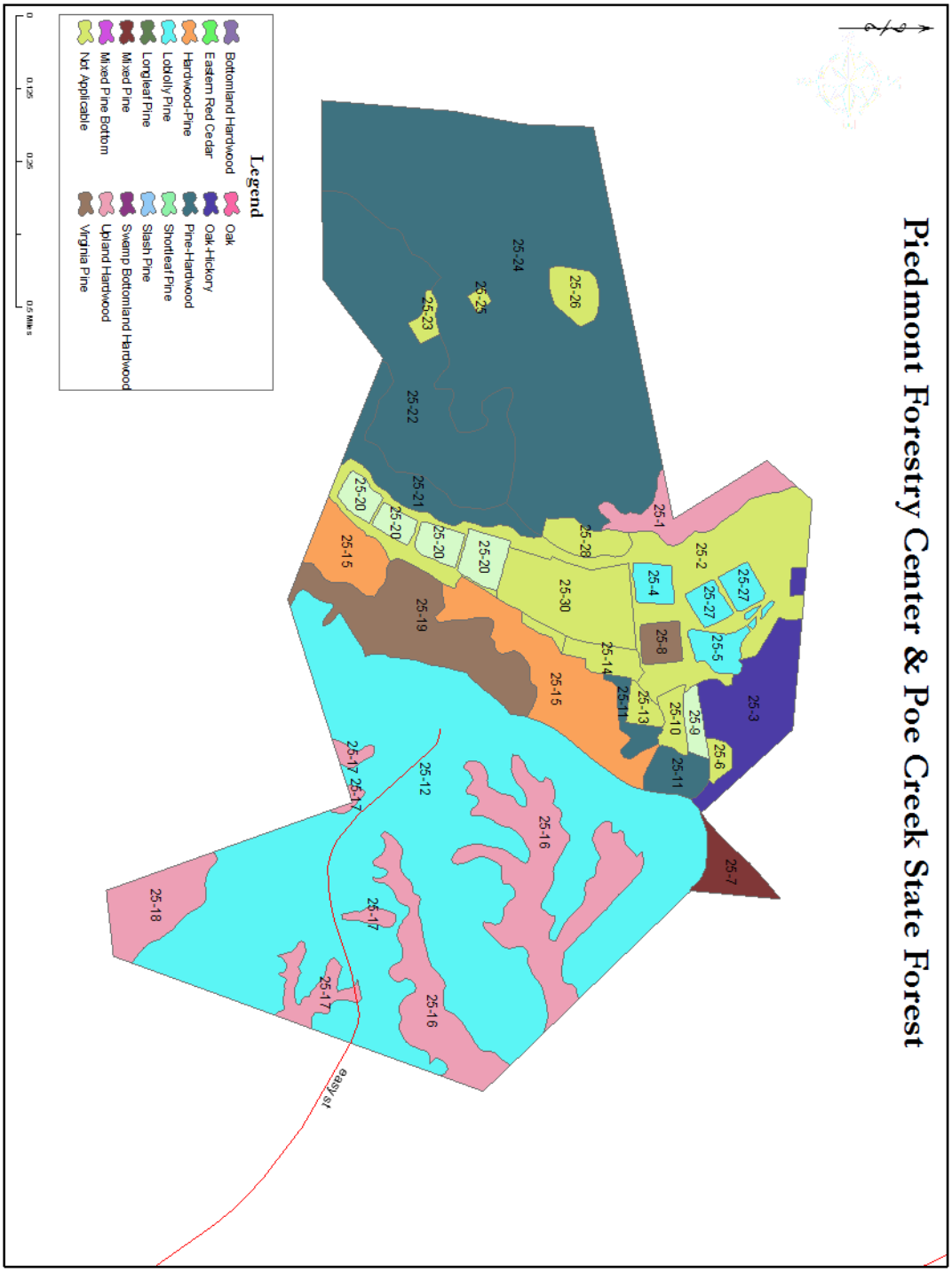
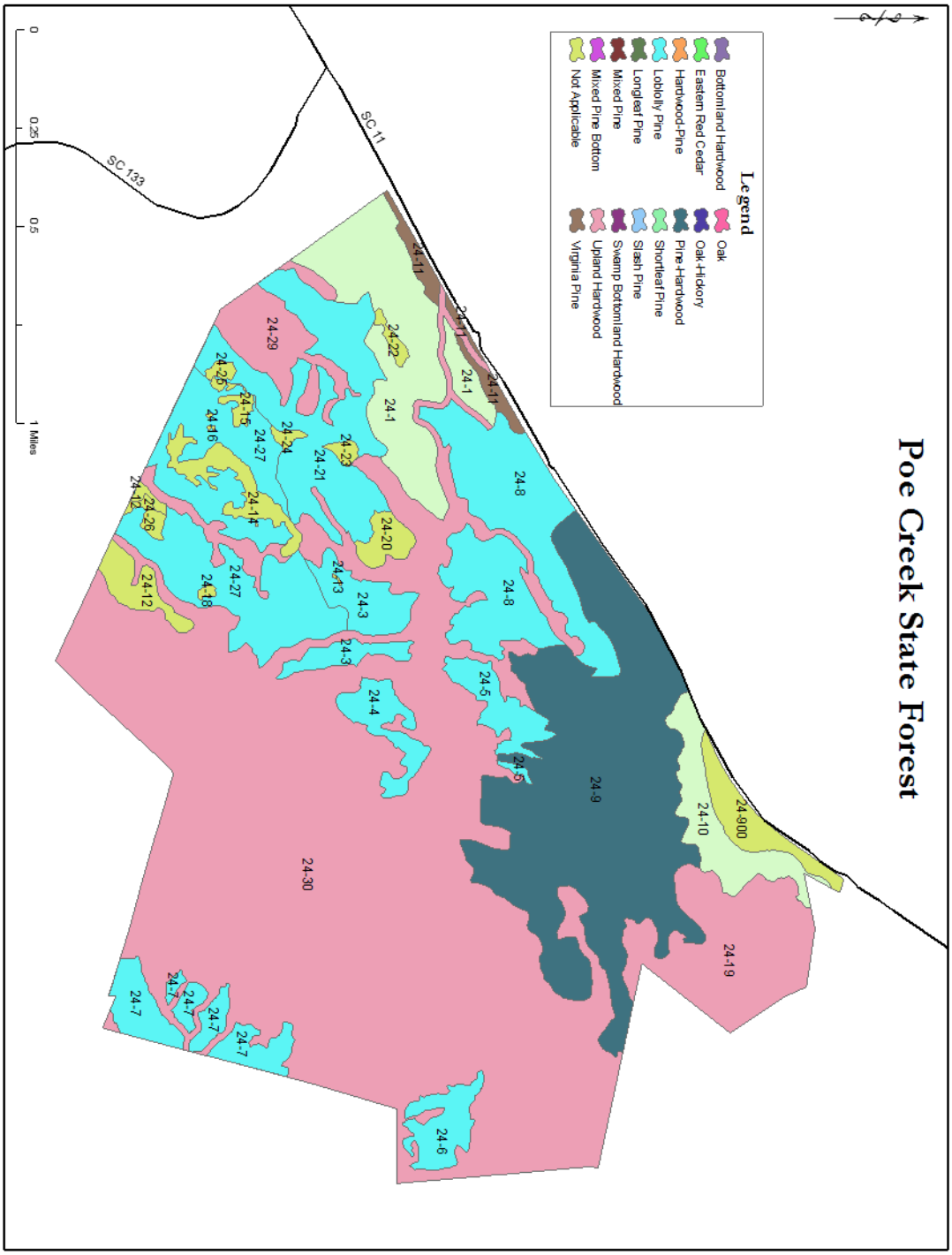


Figure 2. Poe Creek State Forest stand delineations.



Poe Creek State Forest SFI Commitments

A. Formal commitment to the SFI Standard

The South Carolina Forestry Commission and Poe Creek State Forest in particular are committed to the SFI Standard, and following the guidelines for the Standard as part of our State Forest Lands management program.

B. Formal commitment to comply with applicable social laws

The South Carolina Forestry Commission and Poe Creek State Forest in particular are committed to complying with all social laws, including but not limited to those covering civil rights, equal employment opportunities, anti-discrimination and anti-harassment measures, workers' compensation, indigenous peoples' rights, workers' compensation, indigenous people's rights, workers' and communities' right to know, prevailing wages, workers' right to organize and occupational health and safety.

C. Fiber sourcing policy

The South Carolina Forestry Commission and State Forest land division has not developed and does not have plans to develop a fiber sourcing policy. However, while it is not within the operational scope of our State Forest lands to have a robust fiber sourcing policy in place, we do adhere to many principles of sustainable forestry and best use of forest products. All harvests conducted must be done in strict accordance with BMP guidelines, and we monitor harvesting operations to ensure compliance.

Forest Land Management (SFI Objectives 1-15)

1. Forest Management Planning

A. Forest management plan(s)

Sustainability is and always should be a main concern of responsible forest management. In accordance with the Long Range Plan for the South Carolina Forestry Commission State Lands, Poe Creek State Forest will be managed to be a healthy, productive, forested ecosystem, while improving the quality of life of South Carolina's citizens through the environmental, educational, economic, and recreational benefits of active forest management. The individual management goals can be subdivided into the following four broad categories.

Environment

Poe Creek State Forest will serve as a leader in environmental protection by implementing science-based, multiple-use forest management practices. Conservation of biological diversity will be a high priority. Protection of soil, water, and air resources will be an integral part of all forest management activities.

Education

Poe Creek State Forest will be utilized as an outdoor classroom, providing the necessary educational resources and opportunities to raise the awareness of the benefits of forest resource management. We will strengthen our association with colleges and universities to promote forestry-related research and outreach to forest landowners and forestry professionals. Our State Forest will be used as a training center for agency personnel to meet job demands.

Economy

Poe Creek State Forest will contribute to local and state economies through the sustainable production and sale of forest products. Comprehensive planning, using the latest technology, will be employed to determine sustainable harvest levels. Revenue will be utilized to further the mission of the agency.

Recreation

Poe Creek State Forest will provide outdoor recreation, compatible with forest management activities. Through statewide and local planning efforts and on-site monitoring, we will involve technical experts and user groups in determining the optimal levels of recreational opportunities at each State Forest.

Timber Harvesting and Stand Management

Primary management objectives of Poe Creek State Forest are recreation and wildlife management, however the opportunity for limited timber harvesting does exist. The following outline addresses our approach for timber harvest scheduling for each tract. Due to the limited scope of our harvesting activity, we have not considered sustainability a problem, and instead have focused on harvesting as means to maintain stand health.

Piedmont Forestry Center

The Piedmont Forestry Center contains several facilities that are available for rental, located within the central region of the property in Cheohee Valley. As such, management focus is much different than other parts of the forest. Any harvest activity must be done in consideration of the viewshed, and overall experience of the users.

In addition, and unique to State Forest lands, a mitigation project was recently completed along Cheohee Creek, prominent stream feature that runs the course of the valley and bisects the Piedmont Forester Center property.This mitigation project has placed the stream, the streamside management zone, and almost 100 acres of upland hardwood into a long-term conservation bank, and thus not available for harvesting. Plans for including more sections of Cheohee Creek into a mitigation bank have been discussed, but at this time no definitive action has been determined. However, the use of this creek for recreational purposes, including daily use visitors and an annual fishing derby for children, would dovetail with future mitigation efforts.

The adjacent valley ridges surrounding Cheohee Valley are characterized by steep slopes, and forested in upland hardwoods, mixed stands and Virginia Pine. Due to viewshed considerations, these areas also are not available for intense forest management. A week regional forest products market also reduces financial gains from harvesting, and in areas where other uses/concerns are present, limit harvest activity to stand/species replacement and issues relating to forest health.

Stand Descriptions

The following stand descriptions have been grouped by stands with similar cover type, age, and management activities. These groupings originated at stand

development, where stands may have been established in concert, but spatially discontinuous. Where further detail is needed for individual stands within a group, it is provided within that section.

Stand : 1
This stand, primarily mixed hardwoods, is the stand most directly impacted by the mitigation project. Management activity is severely limited and at this time, considered a conservation stand.
Recommendation: No action is permitted.
Final Stand Condition: Allow stand to remain in mixed hardwood, and develop naturally. This may favor conversion of stand to shade tolerant species, primarily maple and beech unless fire is introduced.

Stand : 2
This large area is primarily unforested. However, some portions of this stand have recently been planted in mixed hardwood species, primarily those favorable to mesic bottomland, cove sites as part of the mitigation prject. The success of these plantings has yet to be established. In the future, other portions of this stand may be converted to plantation pine, primarily areas where less recreational use is experienced.
Recommendation: Maintain open areas, and monitor small planting along streamside management zone for establishment. Consider areas for planting.
Final Stand Condition: Recreational use limits most of this area to be kept open.

Stand : 3
A small oak-hickory forest, and still in development to maturity. Basal area is 78, with a very small softwood component. Adjacency to other property owners is a consideration.
Recommendation: Manage stand for long-rotation hardwood products. Allow some thinning, and modify harvest activity to leave basal area sufficient as a visual screen, and potential seed source. Given location, a seed tree harvest may reduce basal area too low, and a modified shelterwood harvest might be more appropriate.
Final Stand Condition: This stand will remain a mixed hardwood stand in perpetuity, with management activity conducted to favor more desirable species in terms of masting and timber products.

Stand : 4, 5
Loblolly stands established in 1991. Their relative small size (under 4 acres) is more suited to serve an example forest for the region, and for use in educational and outreach programs.
Recommendation: Some understory control may be required to reduce the competition from sweetgum, and also to improve visual quality of the stand for uses described above. A thinning will be required within the next 5 years.
Final Stand Condition: These two stands should be carried to full maturity, and harvested for sawtimber product class timber. Subsequent to harvest, and

dependant on interest at such time in continuing the use for educational purposes, the stands should either be replanted in loblolly, in a format similar to current conditions, or the plantings should be expanded into the non-forest areas adjacent to the stands, that are not being utilized for recreational purposes. As such, this larger stand, again planted in loblolly or shortleaf pine, should be carried to full maturity, which will provide sawtimber products while reducing the grounds maintenance of the site.

Stand : 6
Non-forested, residence.
Recommendation: No forest management activity.
Final Stand Condition: NA.

and recent inventory of the Virginia Pine stand (19), which is overmature, indicates it is experiencing natural stand replacement by encroaching upland hardwoods. Some pine removal may occur as a thinning operation in these stands, as possible.

Stand : 7
Mixed Pine stand, with a basal area of roughly 70 in pine and 50 in hardwoods. A thinning, This stand borders a road and other property, and those factors should be considered in making harvest recommendations.
Recommendation: Thin stand in coordination with other harvesting activity, planned within the next five years.
Final Stand Condition: This stand should be evaluated for post-harvest planting based on marketability of pine products at the time. Recent changes in pricing for this region have shown decreased sales. If challenges persist, then reduced cost replanting, or allowing for natural regeneration, is recommended. Alternately, if interest continues into using this forest for research, then this stand could be utilized as part of these on-going studies.

Stand : 8
Virginia Pine plantation, planted in a recreational area. This stand is not a timber producing stand.
Recommendation: Allow for natural thinning, and continue to maintain this site for recreation.
Final Stand Condition: This stand will eventually mature into a less dense, shaded recreational area. If usage suggests it remain as such, then species should be planted here in coordination with such, and specimen plantings of shade trees with some mast value should be considered.

Stand : 9
White pine stand, planted along roadside and in lacustrian area of fishing pond. The dual purpose of this stand, serving as both a visual screen and water protection buffer far outweigh any possible harvesting value. Trees should only be removed if they pose a hazard or for forest health issues.

Recommendation: Allow stand to develop naturally. Some removal of basal area may be needed to improve stand health, but not within the next 10 year planning period.
Final Stand Condition: In the future, and as stand conditions change, monitoring for presence of natural regeneration condition should be conducted. If regeneration seems adequate to meet stand objectives as noted above, then no planting should take place.

Stand : 10
Pond. Non-forested
Recommendation: NA
Final Stand Condition: NA

Stand : 11
Mixed hardwood/pine stand around residence.
Recommendation: No action, unless needed for protection of stand health of structures, in area closest to residence. Some thinning may be possible in area closest to road, timed with next harvest activity, however this stand also borders a pond, and consideration for effects on water quality should outweigh harvest demands.
Final Stand Condition: Natural development, with regular thinning as feasible.

Stand : 12
Loblolly pine predominately
Recommendation: Thinn when possible, as needed for protection of stand health..

Final Stand Condition: Natural development, with regular thinning as feasible and possible.

Stand : 30 (PCSF)
Upland hardwood stands
Recommendation: NA
Final Stand Condition: Natural development

Stand : 31
Harvested 2013 allowed to naturally regenerate in mixed upland hardwoods and hand planted ~22ac in shortleaf pine planted 2015 that were deficient in acceptable natural regeneration.
Recommendation: NA
Final Stand Condition: Natural development

Stand 21, 22 and 24 shall be thinned as needed, however adjacency constraints to a facility operated by the department of Juvenile Justice, which is fully enclosed by this stand, will limit operational size and location.

Stands 16, 17, & 18, which are upland hardwood stands in the eastern portion of the center, occupy ridgeline and upper slope positions and will be preserved for soil considerations. The surrounding Loblolly Pine stand will be managed for timber, and a planned thinning operation is due within the next 3 fiscal years.

Stand 3 is an small oak-hickory forest, and will be managed for small scale rotational harvest at maturity.

The remaining stands, consisting of some research plantings, fields, visual buffers, and stands adjacent to employee residences, will not be managed for timber harvesting, except in the cases of forest health and reduced stand mortality.

Poe Creek State Forest

This larger tract of the management unit is primarily used for recreational purposes, however no facilities are managed on the property by the Agency. A small portion of the property is leased to a local agency and managed as Long Shoals Recreation Area along Little Eastatoe creek, a roadside recreational facility open for public use. Stand 10, an upland hemlock hardwood stand immediately adjacent to Long Shoals, will not be managed for timber production due to recreational considerations, stream management concerns, and species management.

The majority of Poe Creek consists of a large tracts of upland hardwoods (see figure 2, stands 29 and 30), with steep topography and limited access preventing these stands from being considered for active timber harvesting.

Stands occupying lower slopes positions have road access and the potential for some management. Stand 1, a large over-mature White Pine stand, was recently harvested due to decline. It shall be replanted in the upper portions with Shortleaf Pine, an appropriate native species, with the lowest slope positions allowed to naturally regenerate in Yellow Poplar. Stands 3, 4, 5, 6, 7, 8, 21, and 27 are composed of Loblolly Pine, are being managed for rotational sawtimber. Stands are thinned on an as-needed basis, and where possible. Previous thinning operations have illustrated the difficulty in access, with some portions of the harvest areas left unthinned do to operator judgement.

Stand 11 is a Virgina Pine stand, adjacent to the main transportation corridor (Hwy 11), and occupies steep ridges and banks. This stand will be left for soil stability and as part of the scenic viewshed.

Several rock outcrops exist across Poe Creek Forest, illustrated in Figure 2 as stands 13, 17, 18, and 19. In some cases, the presence of rare and endangered species associated with this ecotype will limit any harvesting activity within a buffer around the outcrop.

The remaining small stands are composed of wildlife opening, old logging decks, small scale disturbance and other non-forested areas. No plans to reclaim these areas are in place, and will either be managed for wildlife plantings or allowed to naturally regenerate.

B. Assessments and forest inventories supporting long term harvest planning

Data collected to support long-term harvest planning is part of an on-going forest inventory plan. Subsequent to and in coordination with our development of a harvest schedule model, a five-year, complete forest inventory was conducted across all State Lands, including Poe Creek State Forest. This inventory was finished in 2009, and then inventory began again, focusing more directly on areas that experienced recent harvesting activity or planting.

From 2008 through present, the South Carolina Forestry Commission, like many State agencies, has been experiencing a period of reduced budgetary capacity, and a loss of personnel across all components of the agency. This resulted in diminished capability to conduct forest inventory at our previous rate. Current efforts to increase inventory data collection have included the development of better use of onsite personnel, and our inventory methods and data collection are being updated to better meet the needs of our new harvest scheduling client.

Over-arching management of Poe Creek State Forest is supported by a robust GIS database. On-the-ground implementation of harvesting as well as other management operations rely on a GIS database that includes information on roads, soils, hydrology, endangered species, elevation, and other data as needed. These data were obtained from many different State and Federal Agencies, our developed in-house where applicable.

As feasible and constraints allow additional data will be collected to refine stand conditions and management recommendations.

C. Forest inventory updates, recent research results and recalculation of planned harvest levels

Updating of forest inventory has recently undergone a shift, as we have changed our harvest scheduling client. Data is collected using electronic field recorders, and then uploaded to ForesTech Inc. and stored in their off-site servers. This provides better long-term maintenance of data, and also allows for information to be served Agency-wide as needed.

As feasible and constraints allow additional data will be collected to refine stand conditions and management recommendations.

D. Regional conservation planning

The state forest biologist will be the contact person assisting with the known locations and management of biological diversity and threatened and endangered species.

Training

Training of personnel is limited to broad-based educational programs associated with maintaining agency specific training, Registered Forester and in some cases Certified Forester certification.

Monitoring

Monitoring of stand harvesting is taken place by on-site personnel. Due to the limited harvesting at Poe Creek, with many years experiencing no harvest activity at all, personnel have had little difficulty in maintaining operational oversite, and have worked closely with forest operators on all harvest activity.

Records

For an overview of our records, please refer to our current forest inventory (Appendix 1). Other documentation may be available in the form of harvest contracts.

2. Forest Health and Productivity

Reforestation

A. Reforestation and long term forest management planning

Much of our acreage at Poe Creek State Forest is forested, however some property acquisitions have been made where acreage has been in agriculture or retired agricultural practices. These areas have been kept in open field agriculture for wildlife purposes.

Our Agency-wide approach to forest management is to avoid pre-commercial thinning where possible. Harvest activity at Poe Creek, due to its limited volume and frequency, is not accounted on a year over year basis. Instead, harvesting activity takes place as needed, with the minor revenue gains added to the overall State Forest Budget. We do not use or plan to use any fertilization or pruning techniques with forest management.

B. Reforestation program

Artificial and natural regeneration schemes are dependant on current stand cover type and desired future cover type. The following provides a general overview of how we approach these stands, however some deviation may be expected on an individual basis, simply as a result of such a large management area.

In much of our pine forest, where we are either replacing a stand with the same species, or replacing to Longleaf Pine, our plan includes artificial planting, using available seed-stock from the Forest Commission Nursery program. However, in these areas where significant regeneration is evident and noticed by field personnel, we may refrain from planting and allow for natural regeneration, especially in stands of limited access or within a streamside management zone.

In our hardwood forests we allow for natural regeneration following a clear-cut rotational harvest. Site conditions following harvest, particularly increased light penetration to the forest floor, have been found to be conducive to development of a stand of desirable species composition. In hardwood stands or more commonly mixed hardwood stands with a significant pine component or site conditions favorable for pine, we may use artificial regeneration to convert the stand to a more desirable composition.

In stands where artificial regeneration is used, we monitor the success of our planting over the years following planting to ensure we have adequate survival. Our planting density has been variable, however we generally plant from 500 (wildlife planting) to less than 700 trees per acre. Following evaluation of our

seedling survival rate, we may either replant the stand or in-plant the stand depending on its condition.

In stands where natural regeneration is allowed, very little monitoring has been conducted. Some spot sampling has been conducted during years 5-10, and results have show a desirable stand component however follow-up assessments are generally not conducted,

C. Assessments supporting reforestation programs

Planting is conducted generally in the late fall through early winter, which is recommended for improved success rates. Planting is conducted by contract work, through a bid proposal program as required by state law. Purchase, handling and storage of the seedlings is conducted by Poe Creek State Forest personnel to ensure proper techniques are adhered to. Monitoring of the planting operation is also conducted to ensure proper spacing and planting depth are maintained, as outline in clear language in the planting contract.

Seedling survival rates are determined through sampling of planting sites in early spring over the 2- to 5-year period following planting. Our experience at Poe Creek State Forest has found that early assessements (first and second-year post-planting) capture good estimates of survival rates, and continued monitoring of stand development less critical. By year five, if planting success is not evident then timing needs of adhering to long-term planning goals requires that we replant the site.

D. Use of improved planting stock, varietal seedlings and exotic species

Agency policy requires that we obtain seedling stock from our own Forest Commission Nursery operation. To assist the operation of the nursery, Poe Creek State Forest allows the nursery to schedule its operations around private vendors first, with may impact the timing of delivery and quality of seedling stock on a year-to-year basis. Generally, we plant a cost-effective Loblolly or Shortleaf Pine variant, however in years where demand is low, we may acquire surplus stock of improved variants. We do not plant exotic species, and are in the early stages of increasing our acreage of native and suitable Shortleaf Pine, which has experienced a marked decrease in planting components across the region.

E. Afforestation

Since most of the Forest is in acceptable forest cover, only a few areas of the forest are in consideration for afforestation work. Primarily, some of our retired wildlife food plots may be allowed to revert to full forest cover. In addition, a portion of the forest is managed as open agriculture for wildlife, and portions of those areas may considered for afforestation over time. However, there are no current plans or requirements for active afforestation.

Use of Chemicals

F. Forest chemical program

Our forest chemical program is limited to pre-planting of sites following harvest and only if needed. We time these broadcast applications near the end of the growing season, to optimize our mortality while reducing other risks associated with heavier spraying.

G. Best management practices

The South Carolina Forestry Commission is the lead agency in South Carolina in designing, interpreting, monitoring, and updating forestry best management practices (BMPs) that protect water quality and conserve site productivity. Best Management Practices are science-based forest management practices, developed pursuant to federal water quality legislation, that minimize or prevent nonpoint source water pollution from forestry operations and give forest landowners and the forestry community guidelines to follow in practicing good stewardship on our valuable forestland. BMP implementation protects the quality of our drinking water and helps sustain the productivity of our forests for future use.

As part of the South Carolina Forestry Commission, the state forests lands, including Poe Creek State Forest, will serve as models for BMP implementation. They should meet or exceed all established BMPs, all applicable state water quality laws, and the requirements of the Clean Water Act for forestland. State forests will make all efforts necessary to ensure that there are no negative impacts to water quality or site productivity from forestry operations (i.e., forest road construction, timber harvesting, site preparation, reforestation, prescribed burning, pesticide application, fertilization, or minor drainage) on their lands.

BMP Training

All state forest employees involved in the supervision of forestry operations will be required to have appropriate BMP training (i.e. Timber Operations Professional or equivalent), and all contractors operating on state forests will be required to have appropriate BMP training (i.e. Timber Operations Professional or equivalent) and will be responsible for BMP compliance on their work site. State forests will include this requirement in all bid invitations and contracts.

Operational measures for maintaining site productivity

H. Stand level practices

Poe Creek State Forest is mostly situated on soils of poor productivity, and indeed this characteristic partially is responsible for the state to acquire the property. From a harvesting approach, the condition of most of the soils, being primarily steep and susceptible to erosion, requires significant concern and attention to minimize damage by harvesting activity. We outline in all contracted harvesting operations that BMPS be adhered to, skid rows and decks be minimized in size and impact to the site, and field personnel monitoring the harvest address any violations of areas of concerns as they occur. We use a performance bond as part of the contract to ensure all post-harvest clean-up work is conducted.

We have not experienced the need to work with timber contractors to allow for seasonal access to timber to mitigate any problems associated with regular and infrequent flooding. However, in some cases we may provide for inclusions to our harvest contracts in include road improvements as part of the overall bid. These improvements are geared at preventing damage from harvest activity, and in cases improve the current condition of the road, in terms of access, run-off control, and general maintenance.

We require that the site be left to specific conditions that are beneficial to subsequent harvesting, but since we use hand crews to artificially plant, we allow for retention of large woody debris and tops. Site preparation may include prescribed fire application to minimize the obstruction this harvesting debris may pose.

No harvest operations have allowed for biomass removal at Poe Creek State Forest, and no current plan is in place to allow for this practice. While we found on other Forests that biomass harvesting did increase the ease of timber harvesting and may have impacted revenues for that timber, it is hard to calculate the total impact of biomass removal from a revenue vs. site productivity approach, and the revenue stream attributed to the biomass itself is so minimal it has prevented us from any recent applications.

I. Landscape level practices

We have not, in recent years, adopted the use of any landscape level harvesting practices, however we do maintain an active forest-wide road maintenance program. Following harvest activity and road impacts, Forest personnel work to reclaim the road to its previous condition (or better), and reduce any short-term erosion concerns from timber haulage. The following more completely describes our landscape level roads program.

State forest roads will be assessed annually by a designated, TOP-trained individual. The assessment will target erosion problems, improper location, BMP non-compliance, and will address the need for surfacing material, entrenchment, general maintenance, and requirements for the installation of structures or technology to minimize traffic impact. The monitoring process may result in a

determination to limit or restrict forest traffic to control recurring maintenance problems.
• Documentation of annual forest road assessments will be held on file at each state forest office. Documentation will include, at a minimum, dated maps with identified road problem areas highlighted and the prescribed corrective actions indicated.
New road construction or major roadwork will be recommended by the forest director. New road design should comply with all applicable BMPs and should consider location, width, slope, purpose, adaptability to alternate use, and functional life. Cost, urgency, and complexity of construction will be determining factors in a decision to solicit contractors.
• Installation of structures such as bridges, culverts, water bars, ditches, etc. will be in compliance with current BMPs and regulations as may be mandated by other agencies.

Forest Health

J. Forest health programs

We consider forest health as many-faceted. Impacts to forest health are many, and this sections addresses first our approach to natural disasters and forest management, and then the subsequent risks from more common health issues, such as incest and disease outbreaks.

Effects of Natural Disaster

There are several natural disasters that may affect our State Forest lands, though primarily wildfires, flooding events and hurricanes/wind storms are considered the most likely. Indeed, the impacts of these types of events have been recurring and constitute a significant factor in how many of our management operations can take place.

Wildfire

Fire is a natural part of the forest ecosystem across much of the State Forest system. We maintain a program of prescribed fire management, both to enhance the condition of the forest stands while also serving to mitigate wildfire risk through forest fuels reduction. However, periods of time exist where the risk of uncontrolled wildfire on State Lands is high. In such cases, the South Carolina Forestry Commission, being recognized as the Agency with authority over

containing and suppressing all wildfire on both State and private lands, is readily equipped to address fires on Poe Creek State Forest by trained personnel.

Flooding

Flooding poses a minimal risk at Poe Creek State Forest, of short duration, and only along existing stream and creek bottoms. Access during these events may be limited, and some road improvements may be required post-flooding. Timber harvest activities at Poe Creek are generally limited to regeneration harvests potentially up to 100 acres in size, however size is usually limited to 50 acres or less. Adjacency restrictions are adhered to as described in our management section, and the stand is allowed to naturally regenerate. When needed, buffer strips are used to protect our riparian zone forest, and some thinning may be conducted in these stands as needed. These thinnings are done in accordance to BMPs, and help to maintain a healthy forest while providing some addition revenue.

Hurricanes

While small-scale wind events occur fairly frequently across the forest, we consider the damages and management implications to be generally small and can be addressed on an individual basis. Large-scale wind events, primarily hurricanes, are an inevitability in the Southeastern Coastal United States. Due to being farther removed from the coastal area, damage from hurricanes at Poe Creek are considered to be minimal. Through thinning operations, we maintain stands with adequate spacing which reduces windthrow susceptibility. Also, as a part of the States' Incident Management System, we have an enhanced ability to address the immediate effects of a hurricane event. Through training, maintenance, and readiness planning, we can open roads, provide access, and generally address user safety immediately after an incident.

Ice Storms

The risk of severe ice storms in the northwestern region of South Carolina is moderate, and does occur on an irregular cycle. Salvage logging will be performed, where possible, in the event of impact on any portion of the Forest.

Insects and Disease Risks

We consider active forest management, and maintenance of stands in a healthy and vigorous growing condition, as the most important approach to reducing impacts from insects and disease. Prescribed fire is used to promote forest health,

but only in limited capacity due to access, topography, species cover and personnel requirements. Our location in northwestern South Carolina has a limited planting risks from several species of insects, and timing of replanting will be optimized to reduce this risk. Frequent monitoring of our Forest is required to address these risks on an as-needed basis.

Some monitoring of the Forest is conducted as part of State-wide initiatives, but we generally address areas of concern as they develop. Where possible, we minimize the impact or spread of the outbreak through harvesting, a successful and recommended approach to some insect control. All such activities are incorporated into the planned harvest activity, and updates made to our stand inventory as required.

K. Assessments supporting forest health programs

Our most important data collected for forest health is our forest inventory data, used to determine the timing of harvest operations. This data focuses on standard metrics needed to develop growth and yield models, including trees per acre, basal area, species, individual trees measurements of diameter at breast height, stopper height (height to first defect), and total height. If no defect is found, we use total tree height to develop volume estimates.

Other types of assessments that may apply include regional studies conducted by our Agencies Insect and Disease laboratory, which monitors for outbreaks and insect population measures, and general day-to-day assessments by on-site field personnel.

L. Fire prevention and control

As previously discussed, the Forestry Commission, and thus Poe Creek State Forest is the lead Agency used to address wildfire suppression in the state. This designation provides us with ample resources and training to maintain an active prescribed fire management program.

Through the use of fire to reduce fuels, we have seen improved site conditions for planting, and improve stand conditions through reduction of hardwood competition in those stands where hardwoods are undesirable. Decreases in personnel in recent years have resulted in less acres burned, but overall forest condition is still healthy, and as we return to full staffing we anticipate increasing the acreage of our burning program.

Training

Our management staff at Poe Creek is limited to one full time manager, who is well trained in many aspects of forest management. Additional assistance is available for forest management activities as needed by other State Forest personnel As part of the Forestry Commission, all personnel participate in frequent workshops addressing many aspects of forest management and health.

Our staff has included technicians and other employees who are provided the opportunity to complete a forest technician training program geared at improving their ability to assist management, including identification of forest health issues. All staff are required to maintain forest firefighter fireline certification status, which includes an annual refresher course in fireline safety, and completion of a physical fitness examination.

Finally, our Poe Creek State Forest manager maintains the safety and integrity of our chemical applications for wildlife plantings on the Forest. Field application and recommendations are developed cooperatively with our product support agency, we currently do have on staff a licensed pesticide applicator.

Monitoring

Our monitoring program for assuring that stands are replanted adequately and that forest disturbance is minimal, and still being developed into a more robust, formal system. We maintain review on a yearly basis, and supervisor approval of sites as needed. An annual report of our activities is provided as part of the review of the Forestry Commission in its entirety.

Indicator	Measurement Method	Target	Measurement Frequency and Timing	Measurement Responsibility
Site Preparation within 1st year	Site burned or chem. Treated as needed	100%	Annual review	Harvest Supervisor
Sites planted within 2yrs	Trees planted correctly, and at correct spacing	100%	Annual review	Harvest Supervisor
Seedling establishment	Seedling survival checks	75-95%	2-3 yr post-planting	Harvest Supervisor

Records

Our planting plans are available on an annual basis, as part of our bid proposal process. These data are then added as updates to our forest inventory. Chemical

records and application plans may be available as part of the managers planning report. Certification of personnel as fireline qualified is documented through our agency training manager.

3. Protection and Maintenance of Water Quality

A. Key water quality and riparian constraints impacting forest management planning

Our harvesting activity includs stands that contain riparian boundaries, which we address at the implementation of the harvest activity. All areas are managed in complete accordance with BMP recommendations, and frequently exceed the minimal distance requirements as we consider other factors, such as aesthetics or wildlife.

A significant feature of Poe Creek State Forest is the presence of streams designated for trout populations. We manage adjacent forests under the appropriate regulations as set forth by the BMP Guidelines.

B. Water quality and riparian protection programs

As previously mentioned, our agency is the lead in BMP monitoring for the state, and as such we include guidelines for maintaining their use in our timber sale contracts. Site conditions over much of the Forest reduce the need for extensive road and landing design, however in areas where the concern exists our staff works closely with harvest operators to best locate their decks and skid trails.

Our GIS contains several hydrology layers, including streams and other water bodies, and these layers are used to identify areas of concern in stands before harvesting is conducted. Field foresters make on-the-ground assessments for BMP use, and design stand boundaries in accordance.

In cases where there is concern with BMP adherence or rules, we use our Agency personnel in charge of BMP monitoring to assist in making management decisions.

C. Contract provisions

Our harvest contract requires compliance with BMP use, and also the inclusion of a performance bond to promote BMP use or pay for remediation work, as needed.

Training

The Forestry Commission provides for BMP training through administration of the TOP Logger program, and all Agency staff may attend the training free of cost.

Monitoring

We monitor indicators key to water quality as part of our harvest operations review. The following table may be used to illustrate the compliance rate we require of harvest operations. All approval of post-harvest site conditions is through the field forester with supervisory approval.

Indicator	Measurement Method	Target	Measurement Frequency and Timing	Measurement Responsibility
Proportion of stream crossings installed with a quality score of 95% or more.	Post-installation inspection	100%	In conjunction with each installation	Road construction supervisor
Proportion of blocks that comply with riparian BMPs	Post-harvest inspection	100%	Annual following compilation of all final harvest inspection results	Harvesting supervisor

Records

The key supporting documents for BMPS and their implementation are our BMP guidelines produced as part of our Agency, our GIS layers, harvest maps where required, and example contracts, upon request.

4. Conservation of Biological Diversity including Forests with Exceptional Conservation Value

Landscape Level Management Programs and Practices

A. Key biological diversity and wildlife issues impacting forest management planning

Our harvest activity takes into account the protection of critical habitats, and protection of any known threatened and endangered species where presently known or as encountered. One known population of a critically endangered species, and its associated habitat, is present on the Forest, and its protection and preserving is considered a critical long-term goal of our forest management.

B. Landscape level programs

Due to its location in the southern extreme of the Appalachian ecotype, there exists a large range in species composition and diversity across the Forest. We find our current management approach, primarily emphasizing recreation and wildlife management, adequately provides for a these species, habitats, and ecological communities.

Fish and Wildlife

Poe Creek State Forest contains a wide range of habitats including diversity within stands and across the landscape. This mix of forest types provides excellent habitat for many wildlife species, both game and non-game.

Many forest management activities are beneficial to game species of wildlife. Practices such as thinning, prescribed burning, planting beneficial tree species, and supplemental wildlife food plots encourage a variety of game species. White-tailed deer, bobwhite quail, mourning dove, and eastern wild turkey are the most prevalent game species in our forests. Other species, including rabbit, gray squirrel, fox squirrel, black bear, and waterfowl are also present. The streams and managed ponds on state forests contain fishing opportunities for sunfish, largemouth bass, and trout.

Since hunting is one of the multiple-use goals of state forest lands, game management should be aggressively pursued. Most state forest lands are enrolled in the South Carolina Department of Natural Resources Wildlife Management Area program, which allows public hunting opportunities. Through this cooperative agreement, DNR monitors the health of game species and provides recommendations and funding to maintain and increase populations. Forest management activities should be planned to maximize the benefits to game

species by considering appropriate timing of an activity, size of the affected area, and spatial arrangement.

Non-game wildlife species play an important role in management planning and prescriptions on state forests. Threatened and endangered wildlife species and species of concern, including the green salamander, and neo-tropical migratory birds should be considered when forest management activities take place. Endangered species populations should be managed with input from DNR and the US Fish & Wildlife Service, utilizing appropriate habitat management measures to increase and maintain populations. Where sensitive species are known to occur, particular concern should be given to reducing fragmentation of habitat, maintaining and creating additional high-quality habitat, and complying with the Endangered Species Act.

C. Assessments and inventories supporting wildlife programs

As part of the WMA program, key assessments of wildlife are taken by the South Carolina DNR, although Forest staff frequently assist in population monitoring for the DNR upon request. Subsequent hunting regulations, dates and times, and seasonal availability are determined in cooperation with DNR to maintain a healthy forest wildlife community.

D. Forests with Exceptional Conservation Value

Other than the South Carolina DNR, who is our primary contact and advisor for management of critical species and habitats on the Forest, we do not maintain any current associations with other agencies or groups. Also, we maintain any GIS data related to these critical on a request-only basis, so as to discourage site degradation from public access.

E. Landscape considerations in threatened and endangered species programs

At Poe Creek State Forest, there are a few opportunities for us to work imperiled species and/or sites. Notably, the presence of small populations of Sweet Mountain Pitcher Plant, an extremely rare species associated with seeps and rock outcroppings, requires monitoring and preservation, as well as a landscape-wide to improving other available habitat on the Forest.

F. Support for old growth conservation

Our active forest management does not identify old growth conservation as a primary objective. However, in areas of limited access, within riparian areas, swamps, and other sites, we may allow for old growth conditions to remain or develop. Given these conditions are present across a large portion of Poe Creek, the potential for large tracts of timber to develop into old growth forests is significant, and has occurred in a limited capacity along the upper-most ridges and rock outcroppings.

G. Programs to address invasive exotic plants and animals

The Poe Creek State Forest has not been significantly impacted by the presence of invasive plants and animals. Wild hogs, an invasive animal, are present on the forest, and are managed under game regulations as set forth by the South Carolina DNR. Other exotic plants and animals will be addressed on an individual basis as needed.

H. Prescribed fire

The use of prescribed fire has been mentioned in several instances in this document. Forest personnel use prescribed fire in many instances: site preparation, fuels reductions, timber stand improvement, aesthetics, and improved habitat through species management. Our personnel are trained and licensed through the Agency, and we maintain a high level of fire preparedness.

Stand Level Management Programs and Practices

I. Stand level programs

Within stand management allows for increased biological diversity through many factors. Retention of snags, allowance of coarse woody debris, and the robustness of our BMP riparian zone interpretation all increase the variability of habitat and diversity within stands. Our adjacency constraints on harvesting and are limits of harvest size (green-up constraints based on age and tree height, and rotational harvest limited to 50 acres maximum size), also provide for a shifting mosaic of stand conditions at the tract level.

J. Threatened and endangered species

In stands where threatened or endangered species are known, we make management decisions as described elsewhere here. As we implement our harvest activity and develop site-specific plans for product removal, particularly adjacent to areas of concern, we inspect for presence of species and make changes to our long-term plans accordingly. Additionally, we request in our harvest contract that operators also monitor for presence of species, and notify us if any species of concern are located.

Training

For prescribed fire applications, staff are certified through the Prescribed Fire Manager Program, as well as provided training through the status of wildland firefighter. Additional training may be obtained through additional workshops, most frequently as part of the continuing education requirements to maintain registered Forester Status. Most recently, several Forest staff attended a training exercise in adopting harvest plans to benefit forest bird populations.

Monitoring

The key indicators to monitored landscape and stand level biodiversity management programs can be identified in the following table.

Indicator	Measurement Method	Target	Measurement Frequency and Timing	Measurement Responsibility
Proportion of old growth forest by management unit/ecological grouping	Inventory updates	Based on accepted science	Annual	Planning forester
In-block retention levels	Post –harvest inspection (part of post harvest inspection checklist)	Average 7%	Following completion of logging activities on a block specific basis.	Harvest supervisors

Records

Inventory data support the implementation of harvest areas in accordance with our wildlife management considerations, green-up constraints, and the presence of robust riparian habitat. Training records of those employees who have attended the Prescribed Fire Manager training are available through our Agency training manager.

5. Management of Visual Quality and Recreational Benefits

Visual Quality Practices and Programs

A. Key visual quality issues impacting forest management planning

Our visual constraints in harvesting are many. Primarily, we leave forest buffers along travel corridors, and recreational waterways that exceed BMP standards. We also limit harvest size, and manage for timing of harvest activity, to prevent large non-forested openings. We may leave aesthetic buffers along trail systems, or in areas heavily frequented by recreational users. However, in all of these areas we may violate our constraints during harvesting operations where we are converting from an undesirable species to a more desirable species. These decisions are made on a stand by stand basis.

B. Visual quality management program

We do not have an active management program in our road design, and frequently we work with our timber contractors and operators to allow them to install decks and skid rows where best meets their needs. Due to the remoteness of most of our forest lands, we do not generally consider the location of the deck a critical aesthetic concern, however we do work closely to minimize the size of the deck, any debris piles that may be left behind, and ensure that no litter or waste associated with the contractor are left on site. Enforcement of these rules is in compliance with the performance bond inclusion on the timber contract.

At Poe Creek State Forest, where elevation change is significant, mountains, ridge tops and ridge lines are visible for long distances, our viewshed is considered protected by our overall lack of harvesting activity in these areas.

C. Assessments and inventories supporting visual quality programs

We do not currently use any visual quality analysis or digital terrain models to inventory our viewsheds or to make management decisions. While no plans are in place for that incorporation, the Agency and Poe Creek State Forest are committed to improving our ability to better manage our State Land, and may incorporate those programs in the future. Our primary inventory approach to maintain a healthy viewshed is through the use of green-up constraints and adjacency constraints, as discussed elsewhere.

D. Clearcut harvest provisions

Generally, our green-up constraints require a specific height or age to be reached before an adjacent stand can be harvested. Our rotational harvest areas are limited to 50 acres in size, with the only exception being hardwoods, which may be larger

due to the relative increase of direct sunlight on the development of the residual stand.

Public Recreational Opportunities

E. Recreation

The goal of the South Carolina Forestry Commission is to provide outdoor recreational opportunities on the state forests that are compatible with forest management activities. The SCFC will strive to accommodate the needs of the various recreational user groups that enjoy the state forests. However, as is the case for forest management activities, management of recreational activities will not take precedence over the protection and enhancement of the environment. In addition, management for the sustainability of forest products will always take priority over recreation and other forest management activities.

There are a variety of recreational opportunities in South Carolina's state forests. In fact, the opportunities are as diverse as the forests themselves. There are hiking trails, and fishing and hunting opportunities. Other activities include geocaching, picnicking, and bird watching to name a few. Poe Creek State Forest has historically been enrolled in the Wildlife Management Area (WMA) program, which is regulated by the Department of Natural Resources. Therefore, hunting and fishing on this State Forest require applicable licenses and a WMA permit and is allowed only in designated areas during the appropriate seasons. For more detailed information on hunting and fishing activities, refer to the annual DNR Hunting and Fishing Regulations.

It is through sound multiple-use forest management that the Forestry Commission plans to maintain the integrity of and enhance the state forest environment while providing for future natural resource uses, including recreation.

Training

Access to staff for training in wildlife and habitat management, and recreational development is limited. However, workshops are held by the Agency on occasion, and Forest personnel are encouraged to attend.

Monitoring

We can identify much of the success of our recreational programs through the collection and monitoring of fees associated with their use. We also provide users feedback opportunities through many different venues; through our website,

through a personnel-maintained Facebook page, and through personal communications.

From a stand perspective, our use of GIS, and specifically a harvest scheduling model, reduces the potential or requirement for monitoring to ensure that our size limits are not exceeded. However, annual review of planned harvest areas allows for verification, as shown following.

Indicator	Measurement Method	Target	Measurement Frequency and Timing	Measurement Responsibility
Clearcut size does not exceed constraints	Inventory updates	100%	Periodic	Harvest Supervisor and Forest Analyst
Providing needed recreational opportunities	Permit sales	Maintain or increase permit sale numbers	Annual	Forest Director

Records

Key items supporting the above programs that are available for verification include our inventory data, and maps of our recreational sites and fishing streams.

6. Protection of Special Sites

A. Key special sites issues impacting forest management planning

The South Carolina Forestry Commission is aware of many special sites existing across our State Forest system lands, and continues to maintain, preserve, and enhance these sites on an individual basis. Our general guidelines for all State Forest lands expressly forbid metal detecting, collection of artifacts an any kind, digging on or damaging forest lands, or collection of any vegetative material without the express consent of the Agency.

The location of some of these sites, specifically existing structures and cemeteries, are made available to the public with varying levels of access (some of the buildings are still in use by the Agency, and thus access to their interior is limited). However, many of the historical sites are considered sensitive, and information regarding their location is kept within the Agency and made available on an individual basis.

B. Special Sites program

Historical Value

Historical sites are denoted by their cultural, historical, and/or archeological significance and include existing structures, old home sites, grave sites or cemeteries, Native American mounds and middens, historical trails, and others. In most cases, our management approach is to leave these sites as undisturbed as possible, with the location information made available to the public upon special request only. This strategy has helped to protect these sites from the potential damages of collection and looting common at widely known historical sites. The following subsections address each significant category in more detail.

Site of archeological value are present on many locations across the State Forest System. The presence of Native American sites on Poe Creek State Forest has been documented. While the location of these sites is known to much of the general public, we still maintain the location details of these sites in-house to avoid site degradation. In some cases, sites of high archeological value have been discovered, and the Agency is currently working closely with State and/or University archeologists to allow research on the Forest as well as to better understand how to preserve and maintain the site for future generations to enjoy.

A limited number of grave sites and cemeteries are present across Poe Creek State Forest. Access is provided upon request or through existing easements for families who still actively use cemeteries, however maintenance of these access

routes is only improved by the Agency upon request. Harvesting activity is generally excluded from these sites where timber is present, although infrequent harvest may take place as needed to maintain or preserve the site.

Biological Value

Many sites exist across the State Forest system that may be considered to have high biological value, based on species diversity and composition. For much of the Forest, we consider this intrinsic value to be inherent in our current management objectives, which is managed for through species selection, harvest type, and fire regime. These factors may improve or maintain desirable forest conditions. Unless specific action is required on a stand by stand basis, additional management concerns are not incurred on forest-wide stands. However, in locations were endangered species are known or suspected to be present, or where the habitat is considered critical, then the Agency adopts stricter management policies as needed.

Aesthetic Value

The South Carolina Forestry Commission recognizes that in some instances, the aesthetic value inherent to some sites is sufficient to merit additional consideration under our management regimes. Several strategies are in place to protect and enhance these sites. Most commonly, we protect this sites by minimizing occurrence of management activity. The activities that may still continue include applications of prescribed fire, and harvest activity as required to maintain site conditions. Another strategy we use is the extended applications of our standard Best Management Practices, where we exceed recommended or minimum buffer distances around harvest areas to improve the Visual Quality Zones (VQZs) of adjacent areas. This approach not only reduces the visual impact of harvesting to the recreational community, but also improves the intended performance of the buffer strip while providing enhanced habitat and habitat corridors for wildlife.

Other

Sites with unusual, rare, or unique geologic formations, evidence of past land uses desirable for preservation, or other considerations as they are discovered, will be managed as special sites on State Forest lands.

C. Assessments supporting special sites programs

Poe Creek State Forest is currently developing a GIS layer that includes special sites that exist on the Forest. As sites are discovered, they are included in the GIS, however we maintain the spatial data in-house.

Training

No training for special sites has been identified at this time.

Monitoring

We monitor special sites and their continual protection and preservation in the following format:

Indicator	Measurement Method	Target	Measurement Frequency and Timing	Measurement Responsibility
Proportion of identified special sites protected during operations	Post harvest inspections	100%	Ongoing at the completion of each unit	Harvest supervisors

Records

Our management and development of a special sites program is ongoing. A developmental GIS layer is available to document this, as well as the plans as set forth in this SFI.

7. Efficient Use of Fiber Resources (*Forest Resources*)

A. Key Utilization issues impacting forest management planning

At Poe Creek State Forest, our regional location does not provide for strong markets for delivery of forest products, and we suffer significant decreases in stumpage values as a result. Since our primary management of this forest is not timber production, our harvest level is sporadic, and based on needed operations based on stand conditions. In cases where under low-grade material or poor value species are present, for instance our Virginia Pine upland stand, we are allowing natural stand replacement rather than harvesting as the revenue stream is not worth the risk to the resource, and the short-term impact to our viewshed. Similar conditions exist across the Forest, and only areas where stand health concerns and and/or viable revenue streams exist will be actively managed for timber.

B. **Utilization programs adopted**

Post-harvest, we inspect out harvest areas to ensure that site conditions outlined in each harvest contract are met. This includes the treatment of slash and debris, reductions in piles, and that all stems above given diameter are removed. This ensure the site is better prepared for harvesting, burning, and/or receptive to seed dispersal from leave trees.

The Commission and State Forest lands base our volume estimates, used in developing our bid sales, based on common diameter and height specifications. However, we do not translate these measurements into required log utilization specifications, we mentioned above. Traditionally, we have allowed the harvest contractor to determine the optimal specifications for merchandizing. Similarly, as our timber harvesting is done under contract, we have not tried to impose restrictions on how that timber is merchandized, or developed any incentives for the better utilization of off-grade wood.
species and off-grade wood.

C. **Assessments and inventories supporting utilization programs**

Harvest operation sites are only monitored in relation to conditions as outlined in each harvest contract, which includes site conditions post-harvest, relative to slash, debris, and related factors. Our performance bond, included in each contract as described elsewhere, is used to ensure these conditions are met. However, since product utilization has not become a component of our stumpage marketing, we do not have any current assessments in place for that over site.

Following the audit and successful SFI cerification, we recognize the potential for our timber products to have increased market value. Given such, we may, through

a research and trial period, explore the inclusion of product utilization guidelines or incentives.

Training

Training in this section is only applicable to site inspections, and in regard to post-harvest conditions. Our training is provided by supervisory personnel, onsite, and under the general orientation period. We recognize that the Agency has opportunities to develop a better training program to better monitor post-harvest condition assessments, and which may lead into similar assessments of product utilization, as mentioned above.

Monitoring

Key indicators monitored in relation to utilization programs are summarize as following:

Indicator	Measurement Method	Target	Measurement Frequency and Timing	Measurement Responsibility
Inspections with adequate post-harvest conditions	Harvest inspections	100%	Following completion of logging activities on a block specific basis.	Harvest supervisors
Average waste wood levels per sale (potential)	Waste/Site surveys	Company/ forest type specific	Following completion of logging activities on a block specific basis.	Harvest supervisors

Records

The key items supporting the above programs may be available in the following:

- Harvest inspections
- Training records (maintained by Agency Training Supervisory)
-

8. Recognize and Respect Indigenous Peoples' Rights

A. SCFC shall recognize and respect Indigenous Peoples' rights as required by state and federal law.

Currently no state or federally indigenous peoples have claims relating to SCFC State Forest lands. As inventories and management activities are conducted should possible sites be discovered State Forest Manager and State Lands Coordinator are to be made aware. State Historic Preservation Office (SHPO), State Commission of Minority affairs, and state archeologist will be consulted.

B. **When Indigenous Peoples' make claims.**

SCFC State Forest Manager and State Lands Coordinator shall confer with affected *Indigenous Peoples* with respect to sustainable forest management practices

1. State Forest Manager and State Lands Coordinator shall confer with affected *Indigenous Peoples* seeking to:
   a. understand and respect *traditional forest-related knowledge*;
   b. identify and protect spiritually, historically, or *culturally important* sites;
   c. address the use of *non-timber forest products* of value to *Indigenous Peoples*
   d. respond to *Indigenous Peoples'* inquiries and concerns received.

Training

State Forest personnel will be made aware of this new procedure. As issues develop additional training may become necessary.

Monitoring

Key indicators monitored in relation to utilization programs are summarize as following

Records

If something is identified it will be incorporated into a GIS data layer and managed appropriately.

9. Legal and Regulatory Compliance

A. Access to applicable laws and regulations

Several components are involved to ensure staff and contractors have access to relevant laws and regulations. Our Forest personnel are provided with training in BMPS, and work closely with contractors through evaluation of contract obligations. Our contractors themselves are required to be TOP Logger certified in the case of timber operations, and a Certified Tree Planter when hired for planting operations. Adherence to BMPS and other provisions is required within the contract, with performance bond limits to ensure operators remain within those limitations. BMP guidelines and other relevant information is available through many venues, including headquarters of the Forest operations.

B. Compliance management program

Forest personnel conduct post-harvest inspection, as well as site monitoring during harvesting as feasible, and address any issues as they arise. Site inspection includes BMP considerations as well as general site conditions following operator egress. In addition, we maintain an open line of communication with our contractors to allow them the opportunity to contact us as the encounter situations that may conflict with BMP guidelines, their contractual obligations, or other issues. Further opportunity is provided during post-harvest evaluation and any required mitigation work, which is terminated with the release of the aforementioned performance bond.

C. Compliance with social laws

Our Agency personnel are made aware of all social laws, and rights of workers at time of hiring. In addition, our Agency has a defined Grievance Policy for redress of conflicts as they may arise. All information required relevant to worker's rights is post in a public area.

For our contractors, we include language in our contracts that requires the following is ensured for their employees:

- Workers compensation is provided to all employees
- Workers are provided with liability insurance
- Contractor will only employee legally allowed workers

Training

For contractors, the TOP logger program and BMP training is required by contractual agreement. Other regulatory requirements may be addressed in the contract itself, and this outside the scope of a training regimen.

Forest personnel are also provided with training through TOP Logger, BMP training, and other training opportunities that may address legal and regulatory compliance as they become available and as part of personnel's continuing education.

Monitoring

Key indicators monitored in relation to compliance programs are derived implicitly from those references made in Section B, and are highlight in the following table.

Indicator	Measurement Method	Target	Measurement Frequency and Timing	Measurement Responsibility
BMP Awareness	Signage of sales document	100%	Individual sales contract	Harvest supervisor
BMP and tree planting awareness	Approval to bid on contracts	100%	Annual review	Management section
BMP compliance	Post-harvest site inspection	100%	Individual sales contract	Harvest supervisor/BMP Forester

Records

The following is a list key items supporting the above programs that may be available for verification:

- BMP guidelines
- Timber sale contract
- Tree planting contract
- Training records if staff (available through Agency Training Coordinator)
- Training records of contractors (available through Management Section)

10. Forestry Research, Science and Technology

A. Research program

While research is not a significant activity at any of our Forests, as part of the South Carolina Forestry Commission we are associated with many research Opportunities, with the Forest providing sites and data as and when requested. This following sections describes the most prominent research activities currently underway.

The Agency has an Insects and Disease lab, which monitors for different activity across the state, as well as frequently on the Forest. This data is used both in-house and cooperatively with other state and federal agencies. The work conducted by this lab helps to identify threats and concerns associated with insect and disease outbreaks, and better prepares us to address this events as they occur.

The Agency maintains its own Nursery operations and tree improvement operations. Through association with our nurseries, we provide areas for research plantings, actively use nursery stock within our own operations, and serve as a benchmark for tree improvement performance over time.

In some cases, our collective State Forest system have provided land and data as outside support for other research requests, including chemical applications, tree improvement studies, biomass plantations and more.

Our Agency also serves as the liaison for the conductance of Forest Inventory and Analysis (FIA) for the state of South Carolina. Our Agency employees conduct all plot sampling, with coordinated reporting of results which is used both internally and by the United States Forest Service.

Lastly, through our association with ForSight Resources and our development of a Harvest Schedule model, our forest inventory data has been used in the development of forest growth and yield models. This data then used to better adapt our own forest growth to planned harvest levels.

B. Internal research

As mentioned previously, our Agency conducts Insect and Disease studies and Tree Improvement through our Nursery operations. Through our association with the South Carolina DNR, and through our direct participation of most of our State Forests as a Wildlife Management Area (Harbison State Forest being the sole non-participant due to hunting restrictions associated with the property), much of the work performed on biological diversty and wildlife management has fallen

under their purview. Still, Forest personnel frequently assist in data collection as needed.

C. Funding of external research

The State Forest system and Our Agency collectively is not associated with external research funding at present. As a state Agency, we consider our role more associated with providing access and land for research plots where possible as our method of supporting forest research, rather than through direct financial contributions.

D. Regional analyses

As previously mentioned, Agency personnel collect and report FIA data, which is used internally for economic development research, as well as general forest research and reporting at the State Level.

Our Agency has also been the state compliance monitor for BMPS, and have generated annual reports of compliance for many years, and multi-year analysis of compliance in white papers and peer-reviewed journal publications.
Lastly, The Commission, and State Forest personnel, served as lead reporters and committee researchers in a comprehensive analysis of the state, finalized in the South Carolina State Forest Resource Assessment.

E. Climate change

The State Forest system and Our Agency collectively is not associated with any climate chance research.

Training

Adequate training for Forest Research, Science and Technology is difficult to identify. Due to the specificity of the research topics discussed, Agency personnel receive training and educational opportunities related to their unique areas of study.

Monitoring

We identify the key indicators monitored in relation to research programs in the following table.

Indicator	Measurement Method	Target	Measurement Frequency and Timing	Measurement Responsibility
FIA data reporting	Accuracy of data collected	95%	Throughout year	FIA supervisor
Continued contributions of nursery[1]	Realized tree improvement	Increased awareness and sales	Annual review	Nursery Manager
Continued contributions of nursery[2]	Increased supporter of a-/reforestation	Increases in seedling sales	Annual review	Nursery Manager

Records

The following items document the above programs, and are available for verification:

- South Carolina Forestry Commission Yearly Accountability Report
- South Carolina Forestry Commission Annual Report
- Nursery sales reports and white papers
- Insect and Disease white papers
- Annual BMP Compliance report and Journal Publiciations
- South Carolina State Forest Resource Assessment

11. Training and Education

Internal Training and Education

A. Communication of commitment to the SFI Standard

Our plans to communicate are commitment to the SFI Standard are ongoing, and predicated by our successful acceptance into the program. Currently, all SFI communication has been at the upper management level throughout the State Forest system. Upon acceptance, we plan to initially educate our personnel on the SFI program, our role in the program, and how our participation may improve our State Forest, its operation, and their contributions to the State Forest.

B. Roles and responsibilities for achieving SFI objectives

The monitoring of our SFI performance and our maintenance of the Standard will be conducted by the State Forest Analyst, with oversight review by the State Lands Coordinator.
The State Forest Analyst will conduct an annual review of all Forest Directors and Managers, evaluating how the SFI Standard has been communicated, acknowledged or recognized by outside parties, and how its use internally has impacted our daily operations. This review will be summarized, and then evaluated by the State Lands Coordinator.

C. Staff and contractor training and education

Overall training of Forest personnel is reviewed in the following table.

	Forest Directors	Foresters	Forest Technicians	Management Support	Other Agency Personnel
General awareness of SFI commitments	✓	✓	✓	✓	✓
Detailed knowledge of Company objectives and programs	✓	✓		✓	
BMP training	✓			✓	
Wildlife habitat recognition	✓	✓	✓	✓	✓
Chemical usage requirements			✓		✓
Forest health factor recognition	✓	✓	✓	✓	✓
Utilization standards	✓	✓		✓	✓

External Training and Education

D. SFI Implementation Committee participation

The South Carolina Forestry Commission is not an active participant in outside training. Contingent on our acceptance, this status may change.

E. SFI Implementation Committee training criteria and delivery mechanisms

Not applicable, as described previously.

Monitoring

Our monitoring approach to internal training and education is two-fold. First, we are currently developing a new training scheme for State Forest land employees, to address short-comings that have been found during this SFI process. Most significantly, much of our training has become on-the-job experience, and during the orientation of our new personnel. While we have not experienced any negative results from using this approach, it does not allow us to monitor or address areas of training that might be beneficial to our personnel, or that might require retraining at some point in the future. Second, as a new participant in the SFI program, we are in the process of educating our personnel of our involvement, and benefit of participation. The following table outlines our initial approach at assessing our own training levels, while additionally assessing how our participation in SFI is being acknowledged for Forest personnel.

Indicator	Measurement Method	Target	Measurement Frequency and Timing	Measurement Responsibility
Employee Training	Adequately trained in recognized areas	100%	Annual Review	Forest Directors and/or Stand Land Coordinator
Employee's SFI Application	Can express knowledge of and use of SFI and assoc. docs.	100%	Annual Review	Forest Directors and/or Stand Land

				Coordinator

Records

Not applicable, as described previously.

12. Community Involvement and landowner Outreach

Support for Sustainable Forest Management

A. Support for SICs

The Agency, and Forest personnel, provide partial support, mostly in the terms of personnel time, for the following SIC programs.

- Project Learning Tree
- Wood Magic Forest Fair
- Teachers Tour

These different programs require different assistance. In previous years, the State Forest system at large has served as the location and facility support for all of these events. Personnel have provided event support, and will continue do to so. Lastly, some personnel work with these programs as part of their day to day functions, providing, at least indirectly, some financial support in terms of staffing.

B. Educational materials

The development and distribution of educational material to forest landowners has, in years past, fallen under the supervision and direction of other entities within the Agency. Still we provide educational materials on site at each State Forest, and also participate in a leadership role in landowner and educational tours on our lands.

C. Conservation of managed forests

From an Agency perspective, conservation of managed forests has been addressed through cost-share programs. Under our State Forest system specifically, we have provided facilities and program support, although generally on an as-needed basis.

D. Regional conservation planning

Generally, are forests are not part of any regional conservation planning efforts at this time.

Public Outreach and Education

E. SICs and other outreach organizations

Our outreach participation, as previously described elsewhere, is through leadership and participation in the Wood Magic Forest Fair, Teacher's Tour, and Project Learning Tree programs.

F. Public educational opportunities

Our public educational opportunities are many. Across the State Forest system, we participate in Future Farmer's of America events, conduct field tours, provided training and educational opportunities to local schools, provide volunteer opportunities to various groups, and have developed or are in the process of developing self-guided tours, respectively. In addition, personnel frequently provide their services, through speaking engagements and teaching opportunities, to many schools, groups, conferences, and other users on an annual or by request basis.

Stakeholder Concerns

G. Company processes for receiving and responding to public inquiries and concerns

There are many avenues through which public inquiries can be made and subsequent response actions taken. The Agency, and Forests alike, use interpersonal communications, social media, regular postal and email, and other avenues as they arise to take concerns and inquiries for our actions. These inquiries are then directed to the appropriate parties, researched, and then responded to in a timely fashion.

H. Nonconforming practices

The Agency and State Forest system will address stakeholder concerns regarding apparent nonconforming practices on an individual basis.

Training

Other than participation in the aforementioned programs we are involved in, no specific training relevant to community involvement has been identified or provided for. Specific training operations for the operations mentioned is available however, and we have found that personnel who seek to participate in these programs, have also participated in training events and workshops, such as

PLT training. However, through the SFI certification process, and the review of our personnel training levels, we recognize a need to address community involvement as well as other issues as we develop a new training scheme for all State Lands employees.

Monitoring

Monitoring of our response to community involvement will be internal, and on an individual basis as needs arise.

Records

The key items supporting the above programs and available for verification are as follows.:

- Educational records (Training Coordinator)
- Records of educational opportunities provided, as available
- Review documentation and event advertising for listed SIC programs
- Records of FOIA requests (SCFC Public Information Officer)

13. Public Land Management Responsibilities

A. Public land planning and management processes

The State Forest system is involved in land management planning in many venues. Overarching guidance is provided through a Long-Range Plan, which serves as a working document for setting long-term goals and objectives. Following these guidelines, we continue to update and adapt a management plan specific for each State Forest, which more closely addresses their respective objectives and relative concerns. Finally, and in concert with our management plans, a harvest schedule model has been developed, and is in the process of being updated, which supplies ancillary data for our Forest system to better meet its needs.

B. Stakeholder engagement

Contact with local stakeholders over forest management issues is provided through many relationships, associations, and previously mentioned venues, as described elsewhere. Various trail groups, riding associations, and other organizations have, over time, developed lines of communication with our Forest personnel, from interpersonal to regular meetings, where concerns over respected issues can be brought forward, or addressed collectively. However, the State Forest position has, to this point, been to address concerns or requests on an as-needed basis, rather than seek out the inputs of any given group.

C. Indigenous peoples

We address issues or events as if and when they arise, making appropriate contact with tribal leaders when necessary, and taken any corrective actions, as deemed appropriate.

Training

Training for public land management responsibilities has been determined to be non-specific, however Forest personnel have attended leadership programs and other team-building workshops, which help to provide them with training for many relevant situations.

Monitoring

Our key indicators for monitoring programs for involvement in sustainable forestry are limited to the planning records and the implementation of the monitoring process still in development. We identify our preliminary indicators as described here:

Indicator	Measurement Method	Target	Measurement Frequency and Timing	Measurement Responsibility
Long Range Plan usage	Forest system in compliance	100%	Annual review	Forest Analyst
Management Plan	Current to State Forest Need	100%	Annual review	Forest Director
Harvest Schedule Model	Current to State Forest Need	100%	2-3 yr review	Forest Analyst

Records

The key items supporting the above programs that are available for verification are as follows:

- Records of FOIA requests
- Records of meetings with groups and associations
- Long Range Plan
- Management Plans
- Personnel Training records (Agency Training Coordinator)

14. Communications and Public Reporting

A. Summary audit report

Upon completion of this draft version of our current existing management plans tailored to the SFI standard, we shall submit our documents to the certification body for auditing. These documents will be assessed for content, and congruence to the SFI Standard, and the results with be submitted to SFI Inc. for posting to an external website. We shall also maintain all records of our audits for certification or recertification on hand at our Forestry Commission Headquarters in Columbia, SC, as well as each respective State Forest. We shall also work towards developing a documentation library, to better facilitate the auditing process.

B. Annual progress reports

As described previously, the State Forest Analyst is responsible for SFI Standard adherence, and for collating data and preparing and submitting annual progress reports to SFI Inc. The method of review was described in detail in Section 16 (B). Reporting will be conducted in congruence with the SFI program, and will be developed in more detail upon acceptance.

Training

Training opportunities for Forest personnel, specific to the enhancement of their ability to communicate and more effectively report information, with special consideration to the SFI Program and Standards, will be developed as needs and availability dictate.

Monitoring

Key indicators monitored in relation to programs for involvement in sustainable forestry are unknown at this time, and will be developed through our commitment to the SFI program upon acceptance.

Records

Records will not be available until after acceptance to the SFI program is conducted and subsequent participation monitored.

15. Management Review and Continual Improvement

A. SFI program effectiveness assessment

The Agency and State Forests in particular will use the following categories and associated criteria in the evaluation of the effectiveness of SFI programs and achieving continuous improvement in performance:

a. Improved effectiveness of management process
    i. Operational improvements
    ii. Streamlined management
    iii. Improved review process to meet Standard
b. Realized increases in SFI certified wood and wood products
    i. Enhanced revenue stream
    ii. Increased participation of contractors
c. Improved recognition of our leadership or exemplary status in sustainable forest management
    i. Increased request for SFI literature or information
    ii. Increased appearance of Agency in relevant publications and literature
    iii. Increased request for our participation in events or literature related to forest sustainability

B. Monitoring of progress in achieving the SFI objectives and performance measures

The development of useful metrics to monitor progress against the SFI objectives and performance measures is challenging. While some of the expectations are noted previously, other measures have been identified that may support our progress

Describe the basic process used by the Company to monitor progress against the SFI objectives and performance measures. Note: The key data collected to support continual improvement should be captured in the *Monitoring* sections of this document.

C. Annual management review

Describe the timing, participants and content requirements of the annual review of progress including at least:

- Review of overall performance against the SFI objectives and performance measures

- Stakeholder concerns
- An assessment of the effectiveness of current programs
- Areas requiring improvement, related actions to be taken, timelines and responsibilities
- Proposed changes to programs
- External audit findings and any required corrective/preventive actions
- A management conclusion regarding the ongoing adequacy of the Company's SFI program

Training

The Agency and State Forest system have not developed a training program for management review and continual improvement, however we hope our continued association with the SFI Program will provide us opportunities to do so in the future.

Monitoring

The key indicators that may be monitored in relation to effectiveness programs are identified in the following table, however the methodology for measuring these indicators is still in development.

Indicator	Measurement Method	Target	Measurement Frequency and Timing	Measurement Responsibility
Increased awareness of SFI Status	Increased number of bids	Unknown	Individual and Annual review	Harvest Supervisor and Forest Director
Greater Public Awareness of SFI Status	Increased appearance in relevant literature	Unknown	Individual basis	Forest Director, Forest Analyst, and State Lands Coordinator
Increased effectiveness in operations	Personnel overview	Agreement of Personnel in applications	Annual review	Forest Personnel

Records

The key items identified that may support the continual improvement of our Agency association with SFI and the SFI Standards, and that may be available for verification are as follows:

- Annual Report of Audit
- South Carolina Forestry Commission Annual Report
- South Carolina Forestry Commission Accountability Report